

# Standard Operating Procedure Interim Change Notice (ICN)

Page 1 of 1

## Part I: Description of Change (Requestor completes)

1. Document Catalog No.: **ER2002-0188**

2. SOP No.: 1.01, R1

3. Revision/Interim Change No.: 1  
(Current)

4. SOP Title: General Instructions for Field Investigations

5. Description of Change: (Attach marked-up pages if necessary)

ER-SOP-1.01, R1, General Instructions for Field Investigations section 8.3.4 states "All activities related to progress of a Resource Conservation and Recovery Act (RCRA) Facility Investigation will be documented according to ER-SOP-1.04, Sample Control and Field Documentation, and QP-5.7, Notebook Documentation for Environmental Restoration Technical Activities." ER-SOP-1.04, R4 Sample Control and Field Documentation section 8.9.3 states "The field team leader submits, to the Records Processing Facility (RPF), copies of the completed Sample Collection Logs and Daily Activity Log forms or notebooks, and a copy of the completed Chain of Custody/Request for Analysis forms.

This ICN is to provide consistency between these two SOPs by changing in ER-SOP-1.01 the word "and" between Documentation, and QP-5.7, to "or".

6. Attachments Modified, Added, or Removed:

☐ Yes

☒ No

7. Justification for ICN:

This change will make ER-SOP-1.01 consistent with ER-SOP-1.04

8. Requestor: Gabriela Lopez Escobedo

[Signature on file]

3/8/02

(Print name, then sign)

(Date)

## Part II: Evaluation and Approval (QPPL and the Focus Area Leader completes)

9. Evaluation Remarks: (If none enter N/A)

10. Focus Area Leader: Don Hickmont

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3/8/02

(Print name, then sign)

(Date)

11. QPPL: Larry Maassen

[Signature on file]


3/8/02

(Print name, then sign)

(Date)

QP-4.2

Los Alamos  
Environmental Restoration Project

Identifier: <b>ER-SOP-01.01</b>	Revision: <b>1</b>	Effective Date: <b>12/13/01</b>	 <p><b>ENVIRONMENTAL RESTORATION PROJECT</b></p> <p><b>A Department of Energy Environmental Cleanup Program</b></p>
ER Document Catalog Number: <b>ER2001-1018</b>			
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## Environmental Restoration Project Standard Operating Procedure

for:

# General Instructions for Field Investigations

**Los Alamos**  
NATIONAL LABORATORY

Los Alamos, New Mexico 87545

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## Revision Log

<b><i>Revision No.</i></b>	<b><i>Effective Date</i></b>	<b><i>Prepared By</i></b>	<b><i>Description of Changes</i></b>	<b><i>Affected Pages</i></b>
R0	3/16/92	Sandra Wagner	n/a	n/a
1	12/13/01	John Tymkowych	Extensive revision to text and format	All

# General Instructions for Field Investigations

## Table of Contents

1.0	PURPOSE .....	4
2.0	SCOPE.....	4
3.0	TRAINING .....	4
4.0	DEFINITIONS .....	4
5.0	BACKGROUND AND PRECAUTIONS .....	5
6.0	RESPONSIBLE PERSONNEL.....	6
7.0	EQUIPMENT .....	7
8.0	PROCEDURE .....	7
8.1	Pre-mobilization Activities .....	7
8.2	Mobilization to the Site .....	7
8.3	Documentation and Sample Collection Activities.....	8
8.4	Sample Media Evaluation .....	9
8.5	Surveying .....	9
8.6	Perform Lessons Learned.....	9
9.0	REFERENCES .....	9
10.0	RECORDS.....	10
11.0	ATTACHMENTS .....	10

# General Instructions for Field Investigations

## 1.0 PURPOSE

This standard operating procedure (SOP) provides an overview of instructions regarding activities to be performed before, during, and after field investigations done by the Los Alamos National Laboratory (Laboratory) Environmental Restoration (ER) Project. These activities and associated SOPs are shown in the Field Activity Flow Chart in Attachment A.

## 2.0 SCOPE

This SOP is a mandatory document and shall be implemented by all ER Project participants when performing field investigations for the ER Project.

**Note:** Subcontractors performing work under the ER Project's quality program shall follow this SOP for field investigations or may use their own procedure(s) as long as the substitute meets the requirements prescribed by the ER Project Quality Management Plan, and is approved by the ER Project's Quality Program Project Leader (QPPL) before the commencement of the designated activities.

## 3.0 TRAINING

3.1 This procedure shall be used by all site workers for all ER Project field operations. All site workers shall document at <http://erinternal.lanl.gov/Training/Trainingmain.shtml> that they have read and understand this procedure, in accordance with QP-2.2, Personnel Orientation and Training.

3.2 The **Field Team Leader** (FTL) shall monitor the proper implementation of this procedure and ensure that relevant team members have completed all applicable training assignments, in accordance with QP-2.2, Personnel Orientation and Training.

## 4.0 DEFINITIONS

**Note:** A glossary of definitions is located on the ER Project internal homepage <http://erinternal.lanl.gov/WritingGuide.shtml>.

4.1 Contamination Reduction Zone — The Contamination Reduction Zone (CRZ) is designed to eliminate the spread of contaminated materials between the Exclusion and Support Zones on-site. A CRZ will be established

around each Exclusion Zone so that the Exclusion Zone is completely isolated from the Support Zone.

- 4.2 Exclusion Zone — The Exclusion Zone is the area on-site that is considered to have the highest potential for hazardous material exposure, and into which access is restricted.
- 4.3 Field Team Members (FTMs) — May include Laboratory personnel, contractors, and subcontractors. FTMs are responsible for safely conducting the assigned fieldwork in a manner that collects technically valid and legally defensible data.
- 4.4 Hazard categorization (HAZCAT) — A set of simple field analytical procedures whose results help identify the safe handling and legal transportation of unknown materials. It does not take the place of a full laboratory analysis but can be used to characterize unknowns into generic waste streams for proper management and disposal. The use of HAZCAT results helps determine the correct Department of Transportation (DOT) shipping category for a sample.
- 4.5 Radiological screening — A set of radiological measurements to be made prior to shipping materials off-site.
- 4.6 Site-Specific Health and Safety Plan (SSHASP) — A health and safety plan that is specific to a site or ER-related field activity and that has been approved by an ER health and safety representative. A SSHASP contains information specific to the project, including scope of work, relevant history, descriptions of hazards by activity associated with the project site(s), and techniques for exposure mitigation (e.g., personal protective equipment [PPE]) and hazard mitigation.
- 4.7 Site worker — Summary term for all individuals performing general field investigation work.
- 4.8 Support Zone — The Support Zone includes those areas on-site that are outside the Exclusion and Contamination Reduction Zones; it is considered to be the area of minimal potential risk of exposure to hazardous materials.

## **5.0 BACKGROUND AND PRECAUTIONS**

- 5.1 This SOP shall be used in conjunction with an approved SSHASP. Also, consult the SSHASP for information about, and use of, PPE. The SSHASP shall also be used in conjunction with the ER Health and Safety Plan, approved Investigation Work Plans, and/or sampling and analysis plans (SAPs).

## 6.0 RESPONSIBLE PERSONNEL

The following personnel are responsible for activities identified in this procedure:

- 6.1 Quality Program Project Leader
- 6.2 Focus Area Project Leader (FAPL) — A Laboratory/University of California employee responsible for all Resource Conservation and Recovery Act investigations concerning the assigned focus area, for ensuring that site workers are trained, for ensuring that readiness reviews are performed, and for ensuring that the appropriate New Mexico Environment Department, Department of Energy, and Laboratory offices are notified 10 days prior to sampling events.
- 6.3 Field Team Leader (FTL) — Responsible for implementing the corrective action plan as well as the SAP, for ensuring that site workers have the required health and safety (H&S) training. Also assists the FAPL in ensuring that training to applicable SOPs has been accomplished per the Quality Management Plan and QP-2.1 and QP-2.2.
- 6.4 Site Safety Officer (SSO) — A member of ESH-5 [the Industrial Hygiene and Safety group within the Environment, Safety, and Health (ESH) division at the Laboratory], or their approved designee, who is responsible for worker health and safety (the SSO ensures, for example, that assigned workers are physically fit, that the required safety practices are observed, and that workers are monitored for health protection on-site).
- 6.5 Sample Management Office (SMO) Coordinator — Responsible for coordinating the ER Project's sample collection activities and sample analysis.
- 6.6 Waste Management Coordinator (WMC) — Responsible for ensuring that an approved Waste Characterization Strategy Form, prepared in accordance with ER-SOP-1.10, is in place prior to the generation of any waste from a field investigation. Provides support in waste management and disposal activities through LANL Facility Waste Operations-Solid Waste Operations.
- 6.7 Industrial hygienist (IH) — Responsible for monitoring industrial hygiene conditions affecting site workers' health and safety. Industrial hygienists are trained industrial hygiene personnel (from the ESH-5 group or an approved designee).
- 6.8 ER/ESH-5 representative — A Laboratory/University of California employee who is responsible for reviewing the SSHASP to determine if all requirements for the health and safety of site workers, Laboratory personnel, and contractors have been addressed. The ER/ESH-5 representative coordinates with ER, ESH-1 (the Health Physics Operations group), ESH-2

(the Occupational Medicine group), and ESH-5 for resources needed to implement the requirements of the H&S plan.

6.9 Radiation control technician (RCT) — Responsible for monitoring radiation levels on-site. RCTs are trained health physics operations personnel (from the ESH-1 group or an approved designee).

6.10 Document Control Coordinator

6.11 Author

## 7.0 EQUIPMENT

Equipment to be used for field investigations will vary from project to project and will be delineated in the scope of work for that investigation. An attempt to identify all the potential equipment that may be used in an investigation is not practical for the purposes of this SOP. It is assumed that field investigations involve standard sampling equipment, PPE, and waste-management and site-control equipment/materials.

## 8.0 PROCEDURE

**Note:** ER Project personnel may produce paper copies of this procedure printed from the controlled-document electronic file located at [http://erinternal.lanl.gov/home\\_links/Library\\_proc.shtml](http://erinternal.lanl.gov/home_links/Library_proc.shtml). However, it is each person's responsibility to ensure that they trained to and utilize the current version of this procedure. The **author** may be contacted if text is unclear. The **Document Control Coordinator** may be contacted if the author cannot be located.

**Note:** Deviations from SOPs are made in accordance with QP-4.2, Standard Operating Procedure Development, and documented in accordance with QP-5.7, Notebook Documentation for Environmental Restoration Technical Activities.

### 8.1 Pre-mobilization Activities

Prior to conducting a field campaign, a readiness review will be conducted in accordance with QP-5.3, Readiness Planning and Reviews.

### 8.2 Mobilization to the Site

Once on-site, separate areas may be designated by the FTL, with SSO and, if required, IH approval for operations management and analytical needs. These may include, but are not limited to, the following areas.

8.2.1 Data Management Area — A central area which is sheltered from weather and set up in the support zone for temporarily retaining all documentation generated on-site during the field effort.



- 8.2.2 Sample Management Area — An area which is sheltered from weather and set up in the support zone for storing all sampling equipment for the field event when not in use (this includes spare sample containers, identification labels, coolers with hasps and locks, field screening equipment, etc.). In addition to sampling equipment, samples will remain in this area until they can be sent to the SMO to ensure that the chain of custody is not broken.
- 8.2.3 Screening Area — An area which is sheltered from weather and used to rapidly field-screen sample material for radiological and/or chemical contamination. This area may be located in the CRZ. Sampling equipment and materials will remain here until screening results are available. Samples will be handled at this location to reduce the potential of contamination from the surface of the container. In addition, excess media (soil, cores, sediment, biota, etc.) will remain in this area until screening results are available and media can be transferred to the sample management area or managed and disposed of as waste.

If the samples are not screened on-site, the samples will either be preserved in the CRZ and a duplicate sample sent to the radiological screening lab, or the samples themselves will be submitted to the radiological screening laboratory. Once radiological results are available, samples will be promptly submitted to the SMO to be packaged and shipped to the designated laboratory(ies).

### **8.3 Documentation and Sample Collection Activities**

- 8.3.1 One copy of each of the ER Project SOPs applicable to the work to be performed will be kept on-site in the data management area at all times, and these copies will be made available to all site workers. It must be documented that all site workers have read and understand these procedures.
- 8.3.2 The **FTL** or designee will conduct daily tailgate briefings during which the SSHASP will be reviewed. All site workers will attend, as will any subcontractors participating in any part of the field effort. Attendance will be documented.
- 8.3.3 All measuring and testing equipment will be tracked and maintained in accordance with QP-5.2, Control of Measuring and Test Equipment, and will be calibrated in accordance with procedures described in the site-specific SAP, the ER Project SOPs, or the equipment instruction manual. Calibrations will be documented.
- 8.3.4 All activities related to the progress of a Resource Conservation and Recovery Act (RCRA) Facility Investigation will be documented

according to ER-SOP-1.04, Sample Control and Field Documentation, and QP-5.7, Notebook Documentation for Environmental Restoration Technical Activities.

- 8.3.5 Field documentation will be submitted daily to the field files located in the data management area. Documentation will be reviewed daily by the **FTL**, and signed, as appropriate.
- 8.3.6 Waste generated during the field effort will be managed according to the Waste Characterization Strategy Form and ER-SOP-1.06, Management of Environmental Restoration Project Wastes.

#### **8.4 Sample Media Evaluation**

- 8.4.1 Where an on-site screening area is available, a representative portion of the media collected will be used for radiological and/or HAZCAT screening before the samples are taken, preserved (see ER-SOP-1.02, Sample Containers and Preservation), and delivered to the SMO for packaging and shipping to the designated laboratory(ies) (see ER-SOP-1.03, Handling, Packaging, and Transporting Field Samples).
- 8.4.2 Excess sampling material will be managed on-site in accordance with ER-SOP-1.06, Management of Environmental Restoration Project Wastes, until analytical results are obtained to afford appropriate disposal.

#### **8.5 Surveying**

Sampling locations shall be surveyed and recorded in accordance with ER-SOP-3.01, Land Surveying Procedures.

#### **8.6 Perform Lessons Learned**

During the performance of work, ER Project personnel shall identify, document, and submit lessons learned, as appropriate in accordance with QP-3.2, Lessons Learned, located at

[http://erinternal.lanl.gov/home\\_links/Library\\_proc.shtml](http://erinternal.lanl.gov/home_links/Library_proc.shtml).

### **9.0 REFERENCES**

ER Project personnel using this procedure should become familiar with the contents of the following document to properly implement this SOP:

ER Project Quality Management Plan located at.

[http://erinternal.lanl.gov/home\\_links/Library\\_proc.htm](http://erinternal.lanl.gov/home_links/Library_proc.htm).

The following documents are cited within this procedure:

ER-SOP-1.02, Sample Containers and Preservation

ER-SOP-1.03, Handling, Packaging, and Transporting Field Samples  
ER-SOP-1.04, Sample Control and Field Documentation  
ER-SOP-1.06, Management of Environmental Restoration Project Wastes  
ER-SOP-1.10, Waste Characterization  
ER-SOP-3.01, Land Surveying Procedures  
QP-2.2, Personnel Orientation and Training  
QP-3.2, Lessons Learned  
QP-4.2, Standard Operating Procedure Development  
QP-4.4, Record Transmittal to the Records Processing Facility  
QP-5.2, Control of Measuring and Test Equipment  
QP-5.3, Readiness Planning and Reviews  
QP-5.7, Notebook Documentation for Environmental Restoration Technical Activities

## **10.0 RECORDS**

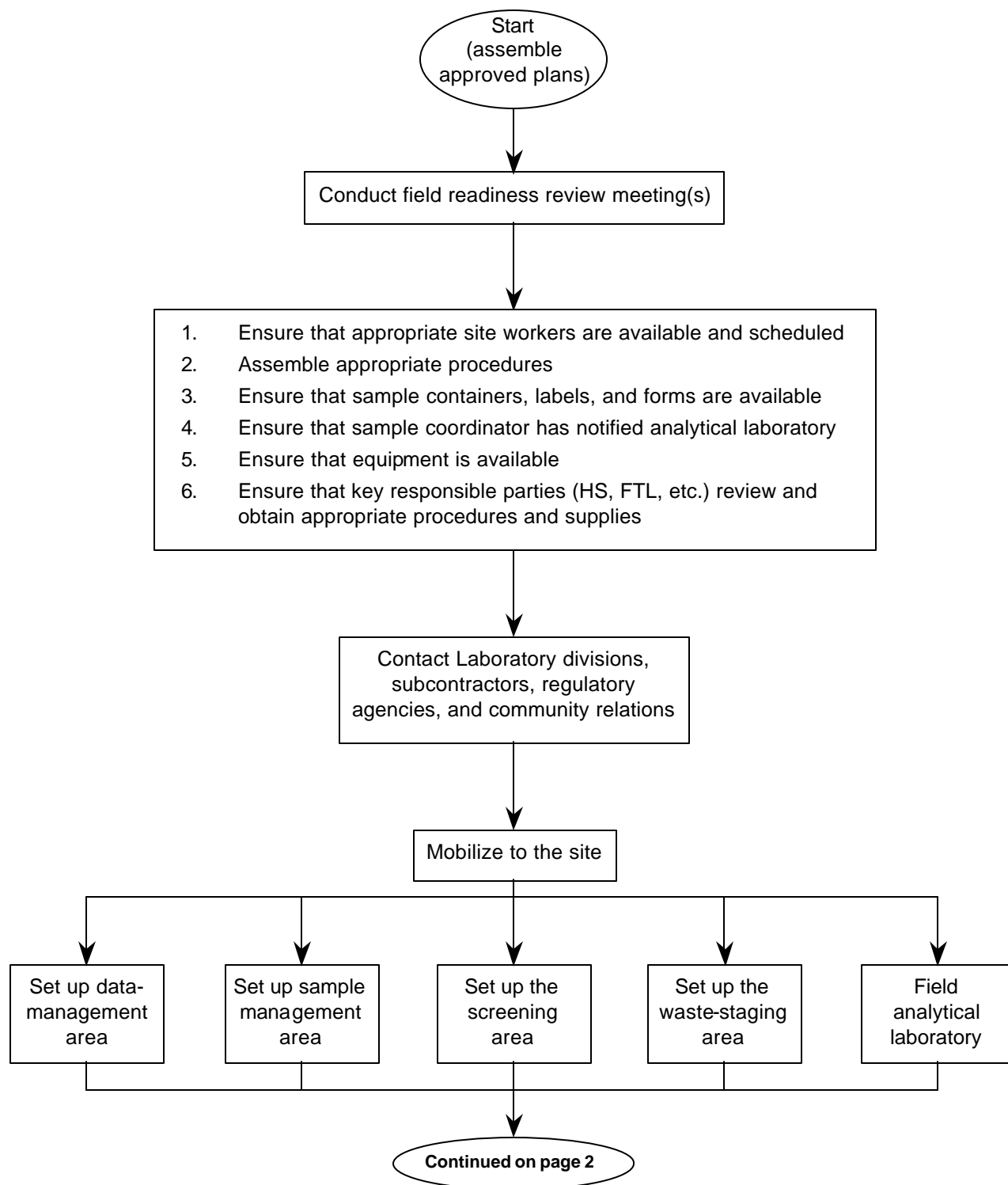
The **FTL** is responsible for ensuring that copies of all records and data generated as a result of the field investigation and readiness reviews are sent to the Records Processing Facility per QP-4.4, Record Transmittal to the Records Processing Facility.

## **11.0 ATTACHMENTS**

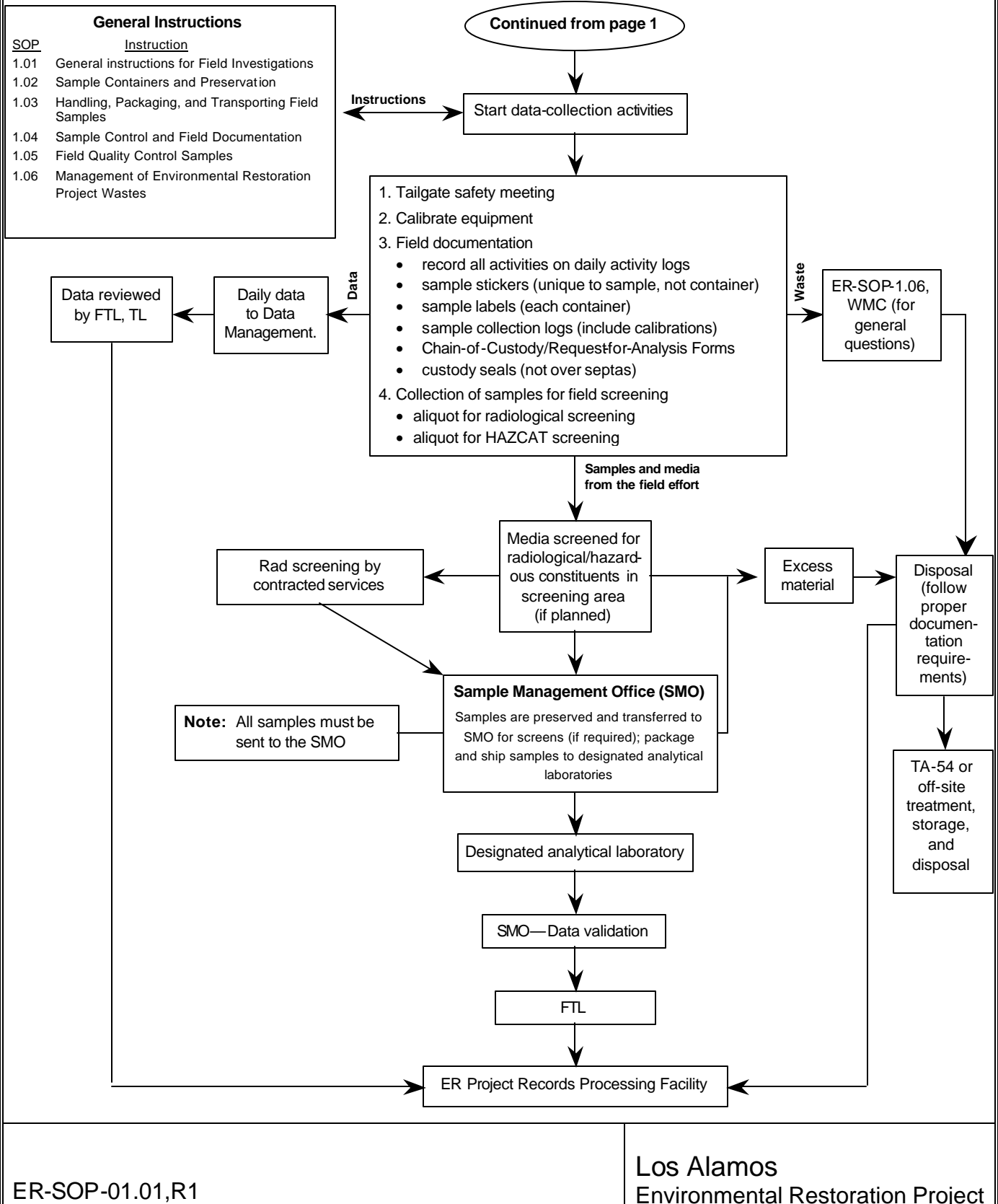
The document user may employ documentation formats different from those in the QPs and SOP's referenced in this procedure—as long as the substituted formats used provide, at a minimum, the information required in the official forms developed by the procedure.

Attachment A: Field Activity Flow Chart (2 pages)

## Field Activity Flow Chart



## Field Activity Flow Chart (continued)



Data reviewed by FTL, TL

Daily data to Data Management.

Data

Data

ER-SOP-1.06, WMC (for general questions)

Disposal (follow proper documentation requirements)

Samples and media from the field effort

Media screened for radiological/hazardous constituents in screening area (if planned)

Rad screening by contracted services

Excess material

**Sample Management Office (SMO)**  
 Samples are preserved and transferred to SMO for screens (if required); package and ship samples to designated analytical laboratories

Designated analytical laboratory

SMO—Data validation

FTL

Note: All samples must be sent to the SMO

ER Project Records Processing Facility

TA-54 or off-site treatment, storage, and disposal

ER Project Records Processing Facility

ER-SOP-01.01,R1

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